

than in Trnava, Trenčin and Bratislava Regions. Almost 8 in 10 current smokers were not refused while buying cigarettes because of their age. In answers of this question, regional differences have been found between Bratislava and Presov and between Trenčin and Košice Regions (in Bratislava and Trenčin the percent not refused was significantly higher than in the other regions).

Discussion

Prevalence of smoking and use of tobacco (Tables 1A and 1B)

According to our findings, among children in Slovakia in smoking initiation still predominate boys. It reflects traditional attitudes of low social tolerance of women's smoking. However, compared to previous studies (5, 17), this difference is smaller than several years ago and indicates the potential increase of smoking among girls and disappearance of sex differences. Beside this, found difference in prevalence of any smoking experience (app. 10%), taking into consideration absolute values (more than one half) is not significant from aspect of public health and preventive measures should be focused both to boys and girls. This attitude is supported by only slight difference between current smoking of boys and girls (Table 1A). Our results also indicate, that in the given age groups besides primary also secondary prevention is already important – almost one-quarter of kids needs some form of intervention focused on smoking cessation. Manufactured cigarettes strongly predominate, however, almost one-fifth of current smokers use also hand-rolled cigarettes, which should be kept in mind in preventive measures. Regional differences both in smoking initiation and usage of hand-rolled cigarettes may be at least partially caused by specific situation determined by social, economic, cultural, ethnical and geographical factors.

From other tobacco products, cigars are used the most frequently. It can reflect youngsters' affords to be cool, since cigars have been traditionally symbol of upper economic classes and high social self-esteem (13). However, because of relatively high prices of cigars, we cannot expect cigar smoking as a potential serious public-health problem. This opinion can be supported also by a fact, that there is only slight difference between prevalence of current cigarette smoking and any current tobacco use (compare Tables 1A and 1B). It means, that the most of current smokers use cigarettes and cigars are smoked only occasionally. On the other hand, cigars can play a role during smoking initiation as a gate to other form of tobacco (9, 13).

Smoking dependency and susceptibility to smoke (Table 1C)

If we assess the mood for smoking in the morning as an important sign of nicotine addiction (10, 19), the survey showed in almost 12% of current smokers dependency on nicotine (Table 1C). However, this proportion is clearly lower than in adult population (15), should be considered very negatively in this age group. Our attention deserves also almost 23% of never smokers susceptible to smoke during the next year (Table 1C). These potential smokers are most important target group for primary prevention. Further deep analysis of their attitudes and factors influencing smoking initiation would be of a great importance in planning of intervention measures. If they become smokers, proportion of current smokers in this target group could be almost doubled reaching almost 50% of the population.

School curriculum (Table 2)

According to our results, teaching on tobacco has been established in a majority of classes. However, according to pupils' reports, in these classes greater attention is paid on health effects of smoking than factors influencing smoking initiation and continuing. Several studies evidenced, that giving information on effects of smoking are not satisfactory effective among youngsters (6, 12, 18). In school curricula attention should be paid not only to adequate quantity of classes dealing with health promotion and prevention, but also to their appropriate content. Such classes should be based particularly on changes of attitudes and assertivity skills. Health effects should be discussed only partially, focusing namely on short-term consequences and cosmetic aspects, (particularly among girls) (11).

Cessation (Table 3)

Proportion of current smokers in our sample desiring to quit is comparable with numbers found in adult population. This corresponds with a high proportion of smokers trying unsuccessfully to quit. Taking into consideration relatively low prevalence of nicotine dependency among the current smokers (Table 1C), the main reasons of failure should be different from tobacco addiction (which is the major reason in adult smokers (3, 16)) and can include particularly psychological and social factors such as lack of assertivity, peer-pressure, positive attitudes towards smoking etc. Latter mentioned facts indicate, that measures focused on this target group should also include appropriate smoking cessation programs, however, different from those for adults. High proportion of current smokers helped and/or advised to stop smoking may also indicate, that such advise or help, anyway quite frequent, is not satisfactory effective and pupils continue their smoking.

Environmental tobacco smoke (ETS) (Table 4A and 4B)

The survey showed a clear association between ETS and smoking of respondents (Table 4A). The relationship is particularly obvious considering the smoking of brother and/or sister and smoking of friends. This finding underlines the social roots of smoking habit. Thus, ETS cannot be considered negatively only from biological aspects as passive smoking, but also from social aspect – children very sensitively perceive behavioural schemes of people in their environment which strongly determines their smoking status and attitudes. Fact, that much more than a half of children are exposed to cigarette smoke in their homes, should be considered very unfavourably and the current situation in this field need effective measures. Similarly, more than 3 in 4 children are exposed to smoke from others in public places, which indicates that even some legislative norms in this field have been approved, we need strongly either more strict legislative norms or executive policies to keep existing ones. Significant differences between current smokers and never smokers also emphasise the role of social environment in determining of smoking status. Similarly, attitudes towards restriction policy and ETS are clearly associated with current smoking status. It means, that legislative process in this field should be accompanied by appropriate information campaigns and mass media programs to change the attitudes. Anyway, even approximately one half of current smokers could welcome more effective policies for prevention of ETS (Table 4B).

Knowledge and attitudes (Table 5)

Our findings indicate, that one of the important reasons for smoking in youngsters are efforts to be attractive. This should be reflected in the preventive programs for school children.

According to reports of respondents, anti-smoking messages are the most frequently perceived in the social gatherings such as sport events, fairs, concertos etc. Also cinema and journal seem to be effective. Relatively, the least effective in anti-smoking campaigns are radio and TV. Differences between boys and girls regarding the role of radio and some regional differences regarding the role of cinema can be caused by different behaviour and ways of spending of a free time of youngsters (Table 6B). Very high numbers of pupils reporting seeing pro-tobacco messages in mass media represent a burning question in tobacco control. Considering fact, that according to existing legislation in Slovakia are all forms of tobacco advertisement totally banned in mass media, our findings indicate either ineffective executive policy enabling to trespass the legislation or the important role of indirect forms of advertisement (Table 6B). Found regional differences (Trencin compared to Kosice) in seeing of pro-tobacco messages in newspapers and/or magazines can be partially explained by either different social, economical and cultural differences or by various level of tobacco-related attitudes of regional journals and newspapers.

Media and Advertising (Table 6A, 6B and 6C)

Association between distributing of various items by tobacco companies and current smoking status underline that such sale promotion actions address effectively youngsters and more effective legislation in this field is needed. Although number of pupils offered by free cigarette samples

seems relatively low, taking into consideration total ban of such form of sale promotion, it clearly evidences for violation of legislation by tobacco companies representatives. Found regional differences can be explained the most probably by various activity of tobacco companies representatives in these regions.

Access and Availability (Table 7)

Relatively small proportion of current smokers smoking at home indicates rather low level of tolerance of children' smoking by their parents. It can be considered positively, particularly from the aspect of social acceptance of tobacco control measures focused on youngsters. As in previous findings, our results evidence for dramatic violation of law regarding restricting of minors sale, since current legislation totally bans sale of tobacco products for youngsters under the age of 18. Found regional differences can be explained at least partially by various social environment and economic conditions in these regions.

Implications for practice

Results of GYTS Slovakia, 2002 indicate to some epidemiological features of smoking in the studied population from which some conclusions regarding prevention can be derived:

- Considering progressively increasing trend in smoking among girls in the studied population, tobacco control programs specifically focused for this target group should be implemented.
- Tobacco control measures in school children beside primary prevention should include also smoking cessation program. However, this program should be predominantly based on psychological and social aspects of cessation (motivation for quitting, peer pressure, assertive behaviour, alternatives for smoking etc.) but also occurrence of actual nicotine addiction in the given target group should be kept in mind.
- In teaching on tobacco, working out of curricula with the appropriate content (mainly focused on changes of attitudes and social aspects of children' smoking) would be helpful. Beside this, teachers should be specifically educated in this field (how to teach on tobacco).
- The survey clearly showed the need for more efficient policies in environmental tobacco smoke. From this aspect, it should be mentioned, that currently in Slovakia no legislation norm touches passive smoking of children, caused by smoking of their parents and other relatives.
- Results showed an urgent need to develop more effective executive policies for already existing legislation including effective competencies for supervision bodies as well as higher penalties. Formulations in some legislative norms enable inappropriate interpretation making them ineffective. This should be kept in mind in their amendment.

Suggestions for further research:

- Children susceptible to smoking during the next year are of particular importance. Deep analysis of their attitudes and factors influencing smoking initiation and ways of their effective modification should be studied.
- Further analysis of found regional differences can help in looking for general features of epidemiology of smoking and factors influencing its initiation and development of smoking habit.
- Considering a relatively high occurrence of signs of nicotine dependence in the target group (almost 12% of current smokers), further research focused on potential use of both nicotine replacement therapy and bupropion in children would be important from this aspect.
- Implemented school programs for tobacco control should be evaluated, especially from aspect of their long-term effects. Also, evidence based curricula adopted for specific conditions, should be developed.

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GYTS Slovakia, 2003, Collaborative Group:

Tibor Baska, M.D., PhD., Jessenius Faculty of Medicine, Comenius University in Martin, research coordinator of GYTS Slovakia, 2002

Mgr. Anna Beresova, Medical Faculty of the P.J. Safarik University in Kosice, field administrator
Andrea Cucova, Faculty of Humanities and Natural Sciences, University of Presov, field administrator

Mgr. Ludmila Jackova, State Health Institute in Banska Bystrica, field administrator

Dr. Lucia Kobeticova, Faculty of Social Work and Health, Trnava University, field administrator

Dr. Jarmila Korcova, Faculty of Social Work and Health, Trnava University, field administrator

Assoc. Prof. Maria Kovarova, M.D., PhD., Medical Faculty of the P.J. Safarik University in Kosice, field administrator

Dr. Daniela Marcinkova, Faculty of Social Work and Health, Trnava University, field administrator

Dr. Anna Pakosova, Faculty of Social Work and Health, Trnava University, field administrator

Dr. Robert Ochaba, State Faculty Health Institute in Bratislava

Darina Sedlakova, M.D., MPH, WHO Liaison Office in Bratislava

Dr. Charles W. Warren, Centers for Disease Control and Prevention, Office on Smoking and Health

Veronica Lea, Centers for Disease Control and Prevention, Office on Smoking and Health

Julliette Lee, Centers for Disease Control and Prevention, Office on Smoking and Health

Ionela Petrea, WHO, Tobacco Free Initiative

Contact address: Tibor Baska, M.D., PhD., Institute of Epidemiology, JFM CU, Sklabinska 26, 037 53 Martin, Slovak Republic, e-mail: baska@jfmed.uniba.sk